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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/712,029	11/13/2000	Dae-Woo Lee	4234-9	9120

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EXAMINER

GOFF II, JOHN L

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 06/23/2003

16

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/712,029

Applicant(s)

LEE, DAE-WOO

Examiner

John L. Goff

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-8 and 12-17 is/are pending in the application.
- 4a) Of the above claim(s) 4-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/27/03 has been entered.

Specification

2. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 12-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed

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invention. Claim 12 requires "extruding a raw rubber material". It is unclear where in the specification the raw rubber material is disclosed as "extruded". It is noted claim 12 originally required "rolling and forcing out the raw rubber material". However, "Rolling and forcing out of" does not require an extrusion process. Claim 12 also requires "wherein the weight of the adhesion-providing agent is at least 30%". It is unclear where in the specification this limitation is disclosed. It is noted the only reference to the weight of the adhesion-providing agent is in the preferred embodiment, and the weight disclosed in the preferred embodiment is 41%. The preferred embodiment does not disclose a lower limit for the weight of the adhesion-providing agent. Claim 15 requires "wherein the weight of the adhesion-providing agent included in the rubber main material is 50% or less". It is unclear where in the specification this limitation is disclosed. It is noted the only reference to the weight of the adhesion-providing agent is in the preferred embodiment, and the weight disclosed in the preferred embodiment is 41%. The preferred embodiment does not disclose an upper limit for the weight of the adhesion-providing agent.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 12-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Independent claim 12 requires "wherein the weight of the adhesion-providing agent is at least 30%" while dependent claim 15 requires "wherein the weight of the adhesion-providing agent included in the rubber main material is 50% or less". It is noted the range disclosed by

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claim 15 includes values excluded by claim 12. This issue should be clarified and reworded as appropriate.

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 12 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Draexler (U.S. Patent 4,551,392) in view of Hoover (U.S. Patent 2,656,292).

Draexler is directed to a composite material for use in a building element wherein the material comprises multiple sheets (layers) including a distinct sheet of EPDM (synthetic rubber), vulcanizing agent (including accelerators), and additives (Column 1, lines 6-7 and 46-49 and Column 2, lines 12-16 and 45-54). Draexler teaches that the sheet is resistant to heat and ozone and exhibits swelling resistance against polar, organic media (water) (Column 1, lines 9-11). Draexler teaches that the additives in the sheet include age resister (age retarders including but not limited to quinoline type (e.g. polymerized trimethyl dihydroquinoline)), an adhesion-providing agent (tackifying resin), a softener (plasticizer oils), and a filler material (Column 2, lines 55-63 and Column 4, line 55). Draexler teaches amounts of each additive can be conventionally determined (Column 2, lines 62-63). Draexler teaches using conventional techniques such as mixers, rollers, extruders, and calenders to form the EPDM, vulcanizing agent, and additives into a vulcanizable composition sheet (layer) of a desired width and thickness (Column 3, lines 5-15 and 49-51 and Column 4, lines 14-17). The vulcanizable composition sheet can then be welded to other material sheets to form a building element

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(Column 4, lines 14-15). Draexler is silent as to attaching a release paper to upper and lower surfaces of the sheet. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Draexler to include providing a release paper on the upper and lower surfaces of the vulcanizable composition sheet as suggested by Hoover to prevent tearing or damaging the sheet during handling, storage, or transportation of the sheet prior to welding the sheet with other materials to form a building element.

Regarding claims 12, 15, and 16, it is noted Draexler does not explicitly recite the amount of adhesion-providing agent used. However, it is noted Draexler teaches that amounts of each additive can be conventionally determined such it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine the required amount of each additive including the adhesion-providing agent as doing so would require nothing more than ordinary skill and routine experimentation. It is also noted the specification does not show the claimed amount of adhesion-providing agent to be an unexpected result.

Regarding claim 17, it would have been obvious to one of ordinary skill in the art at the time the invention was made when making the preformed sheet taught by Draexler as modified by Hoover to cut the sheets such that they have a constant length from the extrusion process to form preforms useful as a product for use in a variety of different applications.

Hoover is directed to a tacky rubber sheet having a non-stick liner applied to both sides of the sheet (Figures 1-3 and Column 1, lines 1-12 and Column 3, lines 13-16 and 24-29). Hoover teaches that the liner prevents tearing or damaging the sheet during handling, storage, or transportation (Column 2, lines 24-30).

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10. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Draexler and Hoover as applied above in paragraph 9, and further in view of Koizumi et al. (U.S. Patent 4,707,528), Takaki et al. (U.S. Patent 5,049,610), and Davis et al. (U.S. Patent 5,612,141).

Draexler and Hoover as applied above teach all of the limitations in claim 13 except for a teaching on using polybutene, phenol-formaldehyde resin, or petroleum resin as the adhesion-providing agent (tackifying resin). However, it is noted Draexler is not limited to any particular adhesion-providing agent such that absent any unexpected results it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate as the adhesion-providing agent in the method taught by Draexler as modified by Hoover polybutene, phenol-formaldehyde resin, or petroleum resin as these were well known and conventional adhesion-providing agents (tackifying resins) useful in rubber compositions as shown for example by Koizumi et al., Takaki et al., and Davis et al.

Koizumi et al. are directed to a tacky rubber resin where the tack is provided by an adhesion-providing agent (tackifying resin) such as polybutene, phenol-formaldehyde resin, or petroleum resin (Column 2, lines 49-68 and Column 3, lines 1-21). Takaki et al. are directed to rubber compositions comprising an adhesion-providing agent (tackifying resin) wherein the adhesion-providing agent can be polybutene, phenol-formaldehyde resin, or petroleum resin (Column 25, lines 24-42). Davis et al. are directed to an adhesive rubber tape having tackiness provided by resins such as polybutene, phenol-formaldehyde resin, or petroleum resin (Column 10, lines 25-44).

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11. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Draexler and Hoover as applied above in paragraph 9, and further in view of Nottebohm (U.S. Patent 2,338,960) and McCortney (U.S. Patent 2,080,730).

Draexler and Hoover as applied above teach all of the limitations in claim 14 except for a teaching on using tragacanth rubber or polyvinyl poval as the adhesion-providing agent (tackifying resin). However, it is noted Draexler is not limited to any particular adhesion-providing agent such that absent any unexpected results it would have been obvious to one of ordinary skill in the art at the time the invention to incorporate as the adhesion-providing agent in the method taught by Draexler as modified by Hoover tragacanth rubber as this was a well known and conventional adhesion-providing agent (tackifying resin) useful in rubber compositions as shown for example by Nottebohm and McCortney.

Nottebohm is directed to a rubber binder that includes tragacanth as the binding agent (Column 1, lines 44-55 and Column 2, lines 1-2). McCortney is directed to a rubber cement composition that includes tragacanth as the resin (Page 1, lines 7-12 and Page 2, lines 25-30).

Conclusion

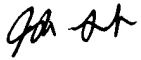
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **703-305-7481**. The examiner can normally be reached on M-Th (8 - 5) and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on 703-308-2058. The fax phone numbers for the

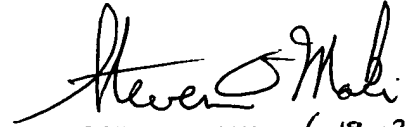
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organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



John L. Goff
June 19, 2003



STEVEN D. MAKI 6-19-03
PRIMARY EXAMINER
~~GROUP 1300~~
AU 1733